

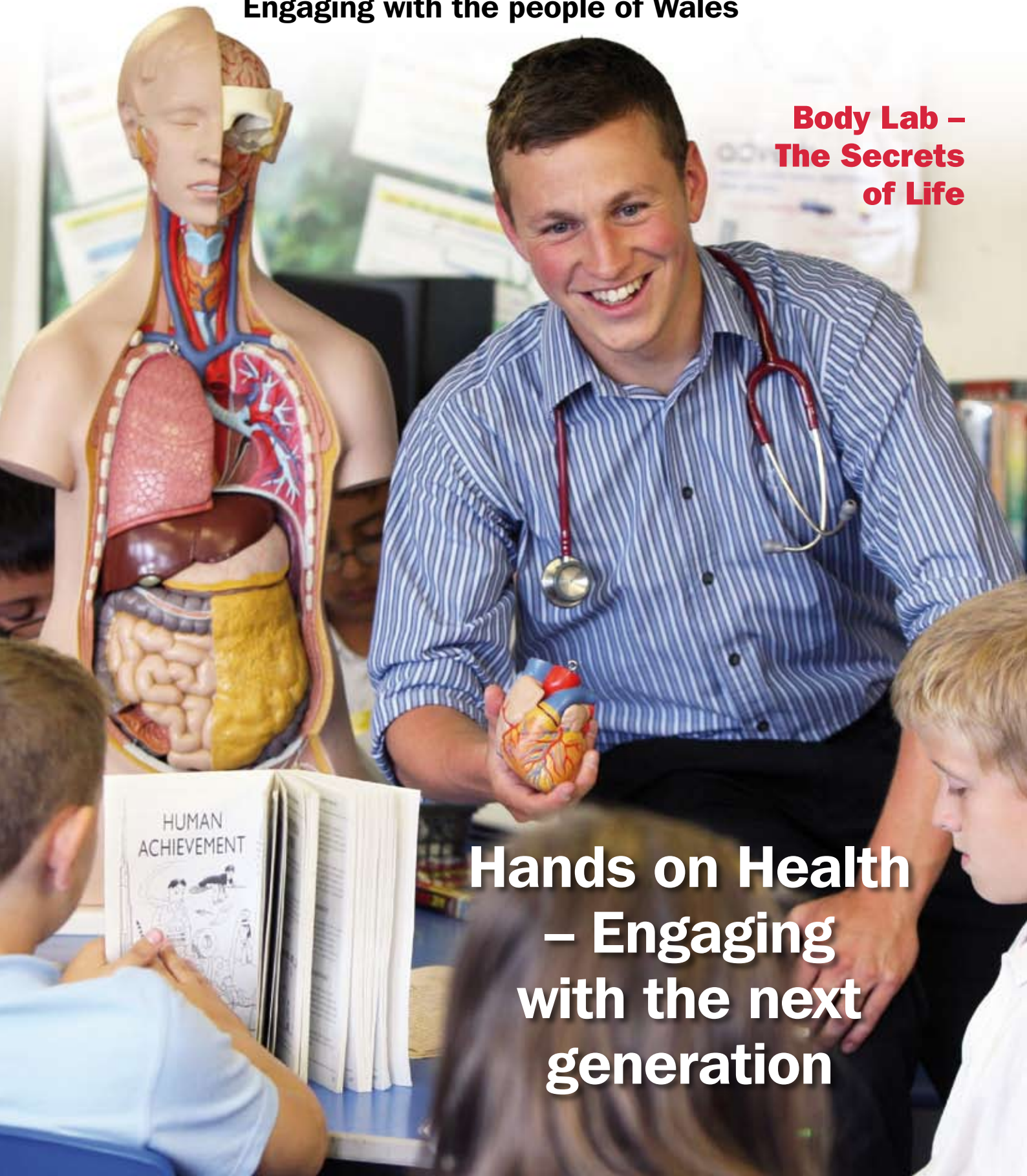
Engage

CARDIFF
UNIVERSITY
PRIFYSGOL
CAERDYDD

2011

Engaging with the people of Wales

**Body Lab –
The Secrets
of Life**



**Hands on Health
– Engaging
with the next
generation**

Welcome to Engage

Cardiff University plays an active role in communities across Wales, and worldwide.

Our teaching, public engagement and research activities work to change lives and for social justice. Our research often has a direct bearing on policy and policy change; our students are actively involved in the social justice agenda; we work to make our University as inclusive as possible; and we help innovative businesses to start-up, grow and prosper.

Our contribution covers a wide range of activities, including widening access to higher education and the professions among under-represented groups. Cardiff is an outstanding place to study; providing highly-skilled graduates for a tough employment market.

The University has a unique place in Welsh life and we enjoy connecting and sharing this at the National Eisteddfod. We are very proud to be associated with one of Europe's largest and oldest cultural festivals.

This year visitors to our Pavilion at the National Eisteddfod can find out more about Cardiff's role in helping Wales tackle some of its biggest health challenges.

The University is leading the fight against ill-health and disease from training the next generation of health professionals to developing new approaches to tackling cancer and mental illness.

Located next to the Science and Technology Pavilion on the Maes the University's Pavilion, developed with partner Technquest, provides a world of discovery featuring stimulating exhibitions and hands-on activities to capture imaginations. 'The Body Lab' exhibition includes walk-in brains and inflatable



skeletons with removable bones, all designed to help learn more about health.

Of course, our work is wider than the important health agenda and impacts on all aspects of Welsh life. From encouraging the next generation of scientists, engineers and mathematicians

to informing and influencing Welsh law and policy through our influential Wales Governance Centre – this all forms part of the University's contribution to Wales.

In this edition of *Engage* you can learn more about just some of this work. Read about how Cardiff is supporting Welsh language learning and teaching; giving people the opportunity to view some of Wales' rarest books and manuscripts; and how we're working with the National Botanic Garden of Wales to build up a DNA profile of the nation's honey to help identify plants which could fight antibiotic-resistant bacteria such as the 'superbug' MRSA.

It's impossible to cover all aspects of our work – which is why we're always keen to engage and open our doors and help communities across Wales get involved.

Examples include our first Public Open Day planned for 17 September, our presence at the annual literary Hay Festival – we are continually striving to find new ways to engage the public with our work.

I hope you enjoy reading about just some of the ways we open our doors to people across Wales, to broaden horizons, and to help stimulate minds and debate.

Professor Hywel Thomas
Pro Vice-Chancellor,
Engagement & International



Visit us at the Eisteddfod

Visit Cardiff University's Pavilion (in and alongside the Science & Technology Pavilion) at this year's National Eisteddfod.

The theme this year is the 'The Body Lab' – an engaging place to learn about the body, how it works and how to take care of it.

The University has once again teamed up with Technquest to deliver hands-on interactive fun and learning for the young and the young at heart.

Activities on offer include:

- Colouring activities, badge-making, and other craft activities
- Enter 'The Body Lab' competition for a chance to win a goody bag
- Be a 'mini-medical', and practice your first aid skills while dressed-up like a real doctor
- Health Check Zone - students from the University's School of Medicine will carry out a number of FREE health checks including body mass index (BMI), blood pressure and peak expiratory flow checks.

The Secrets of Life

Young (and not so young) visitors to this year's National Eisteddfod at Wrexham will get the first chance to try out a brand new puzzle about one of the secrets of life.

A working model has been devised to show exactly how stem cells could be used to help create new organs or joints.

After its debut at the Eisteddfod the hope is that it will be taken to other events across Wales as part of Cardiff University's mission to take its work out to the community.

"The model has been created by University staff in conjunction with Technquest to be unveiled for the first time at the Science Pavilion on the Eisteddfod field," said Dr Arwyn Tomos Jones from the University's Welsh School of Pharmacy.

Again this year, he has been part of the team at the Eisteddfod Exhibition, one of the major events in which Cardiff University plays a leading role.

The annual festival is part of the University's efforts to show how research and academic work are making an important contribution to life in Wales and beyond.

"The model is the latest addition to the *Tissue Engineering for Human Healing Exhibition* which was put on for the first time at the Blaenau Gwent Eisteddfod last year," says Arwyn.

"We and the Eisteddfod succeeded in gaining a grant from the Engineering and Physical Science Research Council to highlight work in tissue



engineering associated with the Cardiff Institute for Tissue Engineering and Repair (CITER).

"The project also involves staff members Dr Bob Steadman and Dr Peter Griffiths from the Schools of Medicine and Chemistry respectively and involves setting up tissue engineering exhibits at various locations and activities in Wales. The exhibition at Ebbw Vale was extremely popular, far beyond our expectations.

"Included again this year is the *Operation* game, based on the popular children's game, but much larger. Children between six and ten years of age were particularly thrilled at being able to transplant 'eyes', 'kidneys', 'bones' and 'tendons' from a 'human body' in a race

against the clock with prizes for the quickest being awarded at the end of each day.

"The whole exhibition is a great opportunity to give science a platform within Wales and is part of the University's programme of public engagement with science."

As well as being open all day every day during Eisteddfod Week, parts of the exhibition are being taken to other events with the hope of an appearance at the Green Man Festival that follows closely after the Eisteddfod.

Students and lecturers from Cardiff University will be on hand to guide visitors and answer questions.

Arwyn, who is originally from Llanrwst, joined Cardiff University in 2001 after working in Germany and the USA.

He has been a member of the Eisteddfod's Science Committee for four years and is committed to promoting science in Wales. He is currently a Reader in Membrane Traffic and Drug Delivery focusing on identifying new methods for getting drugs into diseased cells in the body.



Famous films inspire discussion

Classic and blockbuster films are helping scientists from Cardiff University discuss their ground-breaking work and latest findings with people from all walks of life.

The award-winning film *Poetry* was the latest to be shown in the Cardiff sciSCREEN series – which brings members of the public and academics together to view films and have an informal discussion about the issues they raise.

In comfortable surroundings, with a drink in hand, the films offer a way of explaining subjects that might seem to be difficult or complex.

“We use the films as a hook to discuss a whole range of academic topics,” explains organiser Jamie Lewis, from Cardiff School of Medicine.

Poetry is a South Korean film which won a major prize in the Cannes Film Festival and shows how poetry helped 66 year-old Mija who suffers from Alzheimer’s Disease.

During the showing by sciSCREEN at Chapter Arts Centre in Cardiff, the audience heard experts discuss the genetics behind Alzheimer’s Disease and how poetry helps us remember.

“The film gave us a chance to bring in experts from genetics, biosciences, English literature and philosophy,” said Jamie.



“A lot of people are interested in films and we hope that through sciSCREEN they also become interested in some of the subject matter.

“We’ve found that we now have regular followers and more than half those who come along are not connected to the University.

“We watch the film together in the cinema and then we have a discussion over a glass of wine. We usually have four or five academics and I limit them to ‘taster presentations’ about their work,” added Jamie, who chairs

the sciSCREEN sessions.

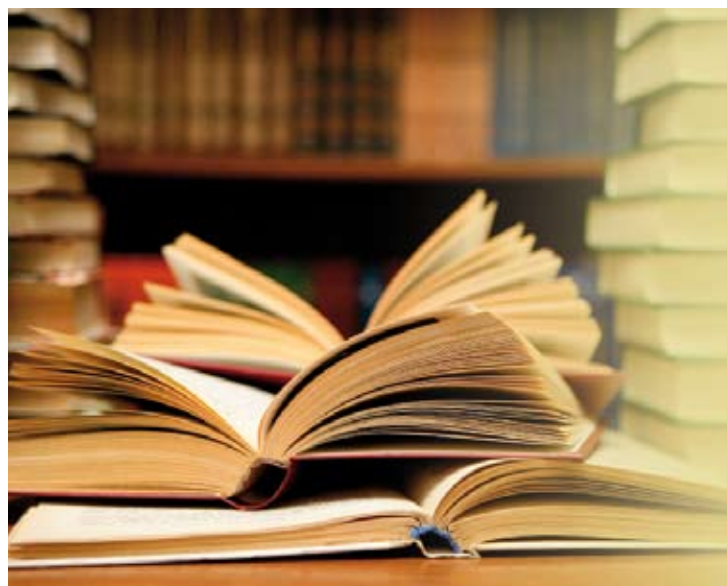
Another film from the last season was *A Single Man*, a study of a gay man in grief. The audience had a chance to discuss the psychiatric and sociological issues raised as well as sexuality and gender.

The King’s Speech, *Black Swan* and *Never Let me Go* are amongst other recent showings that inspired discussions around speech therapy, ballet and cloning.

Cardiff sciSCREEN is organised by the MRC Centre for

Neuropsychiatric Genetics and Genomics (CNGG), ERSC Centre for Social and Economic Aspects of Genomics (Cesagen), and the Wales Gene Park.

For anyone interested in finding out more check out the blog www.cardiff-sciscreen.blogspot.com; follow twitter at www.twitter.com/sciscreen or email sciscreen@cardiff.ac.uk to be added to the mailing list



Frankenstein helps get people talking

One of the world’s most famous monsters is being recruited in a bid to get more people talking.

Cardiff Book Talk is one of the new ideas developed by the University’s Community Engagement Team to use well-known books to help inspire

discussions about major fields of study and research.

“The idea is to use a book as a starting point for discussing different aspects of academic research,” explained James Vilares from the Community Engagement Team.

“For example, we could use

More information is available by e-mailing the Community Engagement team at: community@cardiff.ac.uk or visit www.cardiff.ac.uk/communityengagement where further information will be available soon

Have you heard the one about ...

Heard the one about the academics, the stand-up comedians and the nightclub?

A new initiative is proving that some lecturers and researchers love telling jokes... and are good at it too.

Several academics have performed as stand-up comedians as part of a new project led by Cardiff University.

"I am now the world expert on German sausage" declares Dr Keir Waddington from the School of History, Archaeology and Religion at the beginning of his act.

Other stand-ups include Michael Ward from the School of Social Sciences who talks about working with 'Fizzy McPhysics' a scientist who usually builds sensors for satellites using his more sober real name.

They were all taking part in *Bright Club Wales*, a new initiative

run by the Beacon for Wales and the first event was held in a Cardiff city centre venue last winter.

It is based on an idea that originated in London and Manchester.

"The point of *Bright Club Wales* is to give people a chance to see and hear about the sort of thing that goes on in the field of academia and research, but in a manner which shows the interesting, human aspects of it all," according to Bruce Etherington, Programme Manager of the Beacon for Wales.

"It is also a way of allowing academics to put themselves across, rather than just their research or data. Academics are people too, after all.

"It's a scheme to inform people about the workings of academic life and to show how interesting

and entertaining both the work and the people involved can be," he added.

The Beacon for Wales aims to bring university research closer to people and the Cardiff

comedy show was one of its latest schemes.

"Some of the subjects included modern sexual attitudes, the four-minute mile, German sausages, the effects of group dynamics, what happens when the media gets science wrong, knitwear and childish pranks," said Dr Dean Burnett, a Cardiff graduate and comedian who compered the first show.

"We hope to make this a regular occasion so that every academic can potentially be offered the chance to perform, and for people to become more regularly engaged with university and academic life."



For more information visit: www.engagingwales.org/brightclubwales

Opening our doors

Some of Cardiff University's most iconic buildings will be open to the public on a special Public Open Day designed to encourage more people to engage with the University's work.

On 17 September the University will open its doors, including the flagship Main

Building – a Grade II Listed Building, officially opened in 1909 by the Earl of Plymouth.

"This coincides with the Civic Trust's Open Doors Week when members of the public can visit some of Wales' most beautiful buildings," explains the University's Community Engagement Team.

Many of the University's buildings are key features of Cardiff's civic centre, located alongside the National Museum and City Hall.

There will also be tours of the historic campus offering people a chance to see what goes on behind the scenes. There will be talks and exhibitions about current research including impressive new work on the human body.

The University will also reveal some of the findings of this summer's archaeological digs, including the fascinating work being carried out near the Roman fortress at Caerleon.



People talking

Mary Shelley's *Frankenstein* to discuss religion and creation and we could look at the use of electricity to make life or discuss the book as an example of early science fiction," he added.

The University will be launching its new book club this autumn, combining classic authors such as Jane Austen and Mary Shelley alongside contemporary authors from the best-sellers lists.

Further information on plans for the Public Open Day and the work of the University's Community Engagement team is available at: www.cardiff.ac.uk/communityengagement



Sharing our literary treasures

People throughout Wales can now access literary and historical treasures using some of the latest digital technology being employed by Information Services at Cardiff University.

Readers can now 'flick' through digitised pages of some of the University's rarest manuscripts and books – from a medieval musical score to a limited edition of one of Tennyson's major literary works.

A new 40" digital 3D touch-screen holds the *Turning The Pages* software and a selection of the University's fragile collection of 14,000 rare volumes. It can be taken out to events and exhibitions outside of the University, making available works that might otherwise be locked away for academic use.

It had its first official outing at this year's Hay Festival. Visitors were able to 'turn' the pages in 3D, zoom in, magnify images and admire some of the rare documents.

"We are eager to make as much as possible of the collection available publicly and we are the first institution in Wales to use this digital method," said Peter Keelan,

Head of Special Collections and Archives at Cardiff University Library Services.

"With the support of the Welsh Government and their museums, archives and library body, Cymal, we are now making portable versions of *Turning The Pages* available for touring around Wales," he added.

Some of the books that have already been digitised include:

- The only copy of a Byzantine medieval musical and liturgical chant in Wales;
- A rare historical atlas, including the first individual county maps of England and Wales;
- The first medical compendium to describe the lymph system with detailed illustrations;
- Annotated copy of a players' edition of Shakespeare's *King Henry IV* including comments about a performance of the play in the late 1600s;
- *Idylls of the King*, an extremely rare limited edition of one of Lord Tennyson's major works; and
- *The Flower and the Leaf*, a 20th century example of a book from a private press.

Further information on Cardiff University's Special Collections and Archives is available by contacting: Peter Keelan on: 029 2087 5678 or e-mail: keelanp@cardiff.ac.uk

New science campus

Work has started on Cardiff University's new flagship research building which will start transforming a derelict railway site

in Cardiff into a state of the art landmark for research excellence. As well as bringing scientists from different backgrounds



Could honey help save lives?

Beekeepers across Wales are being urged to help Cardiff scientists develop new drugs that could help combat common hospital infections, including MRSA.

Honey samples are being tested by researchers from the Welsh School of Pharmacy and the National Botanic Garden of Wales in the hope of discovering an antibiotic that can help fight drug-resistant infections.

Honeys have long been known to have anti-bacterial properties and the samples are being used to build up a DNA profile of the nation's honey. That information can then be used to identify plants that could fight bacteria such as the superbugs MRSA and *Clostridium difficile*.

The honey project could also help fight the diseases that are devastating Britain's bees. Bee pollination is very important to biodiversity and agriculture so halting the decline is vital.

As well as sending honey samples, beekeepers are also

supplying a list of the plants to be found near their beehives.

"About 70 per cent of the drugs we use today are from plants. A lot of drug development involves expensive laboratory screening of a huge variety of plant products, often without success," said Professor Les Baillie from the Welsh School of Pharmacy.

"We're hoping to cut out the middle man and let the bees do a lot of the hard work, guiding us to the plants that work."

"If we don't look, we won't find – it may be that just one honey in thousands will have the properties we're looking for, so the more samples we get the better.

"We want as big a cross-section of honeys as possible and we are very keen to have honey from beehives in cities as well as from rural areas because the bees may



will be open to the community

together, the Hadyn Ellis Building will include the local community too.

Named in honour of the University's late Deputy Vice-Chancellor, Professor Hadyn Ellis, the new centre will be home to some of the University's world-leading research institutes and to pioneering community facilities and spaces for public exhibitions.

Covering an area of 9,000 sq metres at the new Maindy Park campus, the building will house the well-established MRC Centre for Neuropsychiatric Genetics and Genomics and two new research institutes: the European Cancer Stem Cell and the Neuroscience and Mental Health Institutes.



They are all examples of the way scientific research is helping to improve people's quality of life, whilst the new community facilities will make the work far

more accessible.

A cafe and a space for public exhibitions will share the Hadyn Ellis building with a top of the range laboratory, teaching and

office facilities and a lecture theatre.

Newport-born Professor Ellis was a pioneer in cognitive psychology and his wife Diane took part in the turf cutting ceremony in May, five years after his death.

He argued that scientists of all disciplines should work together and the building is the first step towards creating a special science campus at Cardiff University over the next 15 years.

"Hadyn was an active champion of interdisciplinary research excellence which the Maindy Park campus will foster," said Cardiff University's Vice-Chancellor, Dr David Grant, who led the official turf cutting ceremony.



be feeding on exotic, ornamental plants in gardens," he added.

The team at the National Botanic Garden have been bar-coding the DNA of flowering plants in Wales and this resource is being used to identify the plants making the honey.

Honey makers are asked to send 200 gram pots, with their address, postcode and details of the plants near the beehive to: Jenny Hawkins, Welsh School of Pharmacy, Cardiff University, Redwood Building, King Edward VII Avenue, Cardiff, CF10 3NB.

Cardiff, Caerleon and the *Time Team*

Britain's most famous historical explorers are joining Cardiff archaeologists to find out more about a unique discovery in south-east Wales.

Channel 4's popular TV series, *Time Team*, will be filming University experts at work at a remarkable new Roman site at Caerleon – with everyone else welcome to visit the dig and see the work in progress over this year's August Bank Holiday weekend.

"*Time Team* is filming the project at Caerleon where we have found a previously unknown suburb of massive monumental buildings on the banks of the River Usk, in fields near the Roman fortress," explains Dr Peter Guest, Senior Lecturer in Roman Archaeology.

"Archaeologist Phil Harding, a familiar face on *Time Team* will join us for three days as we excavate one of three trenches.

"This is part of a major excavation into the new suburb. We have a team of around 40 people working on the ground, including staff and students from

Cardiff University and lots of volunteers.

"We will be trying to find out when the buildings were constructed, what their purpose was and are we right in thinking that the buildings included baths, warehouses and possibly temples. We will also ask why the buildings went out of use.

"We invited *Time Team* as we thought the two million or so regular viewers would be interested in the work and the fact that we have made such a fantastic discovery.

"This has all happened very quickly. In 2009 we had a glimpse of what was outside the legionary fortress at Caerleon and then in 2010 another survey and new geophysical equipment pointed to the existence of a

massive complex, probably unique in Roman Britain.

"We will be keeping a blog and a video diary of the dig as we proceed, summarising all the findings."

The dig is open to the public who can find out how the archaeologists are getting on during special site tours at 11am and 2.30pm everyday (except Wednesdays). Visitors are welcome throughout the August Bank Holiday weekend, 27-29 August, from 10am to 4.30pm for tours, displays and activities to participate in



Research takes to the literary stage

Four leading Cardiff academics have taken to the literary stage to highlight some of the University's world-leading research.

Climate change, the cars of the future, post-traumatic stress disorder among soldiers and a major archaeological discovery were all analysed and discussed with audiences at the Hay Festival as part of *The Cardiff Series* organised by the University's Community Engagement Team:

- Dr Peter Guest from the University's School of History, Archaeology and Religion talked about *The Lost City of the Legion* - the civic settlement uncovered by University archaeologists on the banks of the River Usk next to the Roman fort at Caerleon.
- The media and telecommunications industries are perfect examples of wasteful consumerism was one of the key messages from Professor Justin Lewis' talk. Professor Lewis, who is Head of the University's School of Journalism, Media and Cultural Studies, examined news coverage and the role of advertising in presenting climate change to the public.



• Dwindling oil supplies will have a profound effect on transport, was the message from Dr Paul Nieuwenhuis of Cardiff Business School. He talked about *The Car of the Future* and asked if the car can survive beyond oil supplies and, if it does, what it will look like.

• Finally, Professor Jon Bisson, Director of Research and Development at the School of Medicine, raised questions about some widely-held beliefs about post-traumatic stress disorder among war veterans.

The Cardiff Series was part of the University's ongoing commitment to engaging more effectively with the public and gave audiences at Hay Festival a chance to learn first-hand about Cardiff's world-leading research projects.

Welsh – the best ... again

Cardiff's School of Welsh has been named the best Celtic Studies Department in Britain - for the second year running.

The Complete University Guide compares universities according to different criteria including student satisfaction, entry standards and graduate prospects.

Head of Welsh Professor Sioned Davies insists that the recognition reflects the hard work and dedication of staff and students.

"What is particularly pleasing is the very high score for 'entry standards' – we have raised our entry requirements year on year and are now attracting the very best students in the country, offering them a challenging and exciting degree programme," according to Professor Davies.

"The relevance of our provision is reflected in another high score for 'graduate prospects,' showing that a degree in Welsh at Cardiff University meets the needs of employers.

"As well as providing students with a range of specific as well as transferable skills, all our final year students undertake a period of work experience, giving them the edge in the job market.



"Many of our students have secured permanent positions in the institutions they visited as undergraduates," she added.

The School of Welsh is celebrating another success this year after the Urdd Eisteddfod's most prestigious prize - The Chair – was awarded to research student Llyr Gwyn Lewis, for the second year running. He is studying for a doctorate in the work of T. Gwynn Jones and W. B. Yeats

Boost for Welsh medium education

New opportunities for students to study law and mathematics through the medium of Welsh at Cardiff are being developed after the University secured funding from the new Coleg Cymraeg Cenedlaethol.

Two new posts are being created as part of a £5 million national programme to develop Welsh medium provision in Welsh universities over the next five years.

The posts come under the Coleg Cymraeg Cenedlaethol – the National Welsh Medium College – set up by the Welsh Government this year as an umbrella body for Welsh medium provision in all the universities.

They will also contribute to important fields in Welsh life.

One of the posts is in Cardiff's School of Mathematics, addressing the



need for a better supply of highly trained Welsh medium mathematics teachers for secondary schools all over Wales.

Cardiff Law School will be able to increase and improve the valuable bilingual skills needed in the legal profession in Wales today – even more important now that the Welsh Government has full law-making powers.

"Studying through the medium of Welsh increases my ability to get work," says law student Steffan Lewis who received a Coleg Cymraeg scholarship to study a module through the medium of Welsh.

"The work experience with law firms that's part of the scholarship during the second year is great. This gives us a chance to experience working through the medium of Welsh," he added.

"We are pleased to be among the first to play a key role in supporting staff and students to study through the Welsh language," said Professor Hywel Thomas, the University's Pro Vice-Chancellor for Engagement and International.

"These new posts will enable both schools to offer high quality provision and develop more modules through the medium of Welsh.

"We hope to encourage other schools to apply for more of these academic posts in order to develop our Welsh medium provision."